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| 10/589,267      | 08/14/2006  | Katsutoshi Sato      | 294929US8PCT        | 6043             |

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| EXAMINER |
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FISCHER, MARK L

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| ART UNIT | PAPER NUMBER |
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2627

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10/19/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| <b>Office Action Summary</b> | <b>Application No.</b><br>10/589,267 | <b>Applicant(s)</b><br>SATO, KATSUTOSHI |  |
|                              | <b>Examiner</b><br>Mark Fischer      | <b>Art Unit</b><br>2627                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This Office Action is in response to the Amendment filed on September 14, 2009.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US Pub. No. 2004/0114495 A1, hereinafter Kim) in view of Ogata (U.S. Pub. No. 2005/0174918 A1).

Regarding claim 1, Kim discloses an optical pick-up device (Fig. 2) comprising: a first light emitting element (11) for emitting first light beams (11a) having a first wavelength; a second light emitting element (20) for emitting second light beams (21a) having a second wavelength; a third light emitting element (30) for emitting third light beams (31a) having a third wavelength; a first collimator lens (18) that changes one of the first, second, or third light beams emitted from the first, second, or third light emitting element into first rays of parallel light; a second collimator lens (23) that changes one of the first, second, or third light beams emitted from the first, second, or third light emitting element into second rays of parallel light; a first optical system including a first object lens (45), and serving to converge, by the first object lens, the first rays of parallel light and to irradiate the light beams thus converged by the first object lens (45) onto an optical disc (see Fig. 3); a second optical system including a second object lens

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(41), and serving to converge, by the second object lens, the second rays of parallel light to irradiate the light beams converged by the second object lens (41) onto the optical disc (see Fig. 3); an object lens drive unit (Fig. 3, element 40) including a bobbin (50) that holds the first and second object lenses, and serves to allow the bobbin to undergo a drive displacement in a focusing direction perpendicular to a recording surface of the optical disc, a tracking direction which is a substantially radial direction of the optical disc, and one of a radial tilt direction in which movement is performed in a circular arc form on the axis of the radial direction and a tangential tilt direction in which movement is performed in a circular arc form on an axis of a tangential direction which is a direction perpendicular to the radial direction (¶ [0130]); and a comatic aberration correcting means for correcting comatic aberration of the second optical system relatively taking place with respect to the first optical system in one of the radial tilt direction and the tangential tilt direction, which is not controlled by the object lens drive unit, (¶¶ [0118], [0119], [0192] and [0193]). While Kim discloses aberration correcting means that affects aberration correction in an optical path of the second optical system while not affecting an optical path of the first optical system (i.e. out of an optical path of the first optical system), Kim does not explicitly disclose that the aberration correcting means is arranged in an optical path of the second optical system between the second collimator lens and the second object lens and out of an optical path of the first optical system. However, Ogata discloses (see Fig. 6) that comatic aberration can be corrected [0060] by arranging an aberration correcting means (7) in an optical path of an optical system between a collimator lens (lens between elements 2 and 14 of Fig. 6) and an object lens (6). Since Kim discloses aberration correcting means for the light paths of the second optical system (41) and the absence of aberration correcting means for the

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light path of the first optical system (45), it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the aberration correcting means of Kim with the aberration correcting means of Ogata, such that aberration is corrected while the aberration correcting means remains out of an optical path of the first optical system (45) of Kim. The motivation for combination would be to substitute the aberration correcting means of Kim with another well-known aberration correcting means.

Regarding claim 2, Ogata discloses that the comatic aberration correcting means corrects comatic aberration by changing a refractive index of a region intersecting a path of one of the first, second, or third light beams [0060].

Regarding claim 3, Kim discloses that the first wavelength is about 405 nm (¶ [0089]), the second wavelength is about 660 nm (¶ [0092]), and the third wavelength is about 785 nm (¶ [0093]).

Regarding claim 4, Kim discloses that (see Fig. 2) the first light beams having the first wavelength (11a) are incident on the first object lens (45), and the second light beams having the second (21a) and third (31a) wavelengths are incident on the second object lens (41).

Regarding claim 6, Ogata discloses that the aberration correcting means includes a liquid crystal correcting device (see Fig. 6, element 7).

Regarding claim 7, Kim discloses an optical disc apparatus (Fig. 2) comprising: a disc rotational operation means (19) for performing rotational operation of an optical disc; and an optical pick-up device (Fig. 2) configured to scan, by light beams, a signal recording surface of an optical disc operated by the disc rotational operation means to perform recording or reproduction of information, the optical pick-up device comprising: see rejection of claim 1.

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Regarding claim 8, see the rejection of claim 2.

Regarding claim 9, see the rejection of claim 3.

Regarding claim 10, see the rejection of claim 4.

Regarding claim 12, see the rejection of claim 6.

Regarding claim 13, see the rejection of claim 1.

Regarding claim 14, Ogata discloses applying a voltage to a liquid crystal correcting device in the optical pick-up device to control a refractive index to correct the comatic aberration [0060].

4. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Ogata further in view of Kanaya et al. (US Pub. No. 2006/0077784 A1, hereinafter Kanaya).

Regarding claim 5, Kim discloses that a center of the second object lens and a center of the first object lens are held at the bobbin along the radial direction (see Fig. 6), but does not disclose that the first and second object lenses are held at the bobbin in the state arranged in the tangential direction. However, Kanaya discloses arranging first and second object lenses in a tangential direction (see Fig. 4B). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kim in view of Ogata with Kanaya with the motivation to allow the objective lens disposed on the outer side to access a region of a disk at the innermost periphery (¶ [0008]).

Regarding claim 11, see the rejection of claim 5.

***Response to Arguments***

5. Applicant's arguments (see Remarks, Pages 10-12) with respect to claims 1-4, 6-10, and 12-14 have been considered but are moot in view of the new ground(s) of rejection.

***Allowable Subject Matter***

6. Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: Claims 15 and 16 are allowable subject matter over the prior art of record because the prior art of record, considered alone or in combination, fails to suggest or fairly teach: wherein each of the first and second object lenses includes a converging portion that converges light and a flange that connects to the bobbin surrounding the converging portion, and *a portion of the flange of one of the first and second object lenses is removed and the other one of the first and second object lenses is arranged to overlap the portion of the flange that is removed, so that a distance between the converging portion of the first object lens and the converging portion of the second object lens is equal to a width of the flange of the one of the first and second object lenses that is removed.*

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Kasahara et al. (U.S. Pat. No. 5,930,214).

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Fischer whose telephone number is (571) 270-3549. The examiner can normally be reached on Monday-Friday from 9:00AM to 6:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Fischer/  
Examiner, Art Unit 2627  
10/10/2009

/Peter Vincent Agustin/  
Primary Examiner, Art Unit 2627